OPTICAL APPARATUS

[001] This application claims priority based on an International Application filed under the Patent Cooperation Treaty, PCT/DE00/01778 , filed on May 26, 2000, and German Application No. 199 24 783.8, filed on May 29, 1999.

ok to enter sub. spec - Appeal 11/6/04

BACKGROUND OF THE INVENTION

[002] The invention concerns a diffractively and/or refractively operating optical apparatus for passing incident light, preferably sunlight, on to a receiver, preferably on to a solar element. The optical apparatus includes a tracking device which is controlled based on the variation with respect to time of the relative position of the light source and the receiver, preferably based on the position of the sun.

[003] Optical apparatuses that track the direction of sunlight are used in solar installations. They are associated with the solar elements, to make the most efficient possible use of the sunlight; in order to direct the incident sunlight on to the solar element on an angle as close to perpendicular as possible. In the practical context of solar engineering, this is accomplished by using focusing systems with lenses and parabolic mirrors, which suitably deflect and concentrate the light. In order to achieve an optimum effect, these systems track the movement of the sun. This requires large and expensive tracking devices, which precisely control the position of these generally bulky and heavy optical apparatuses.

[004] A press release in the newspaper "Frankfurter Allgemeine Zeitung," supplement No.